

# Selected Stakeholders' Perception of the Contribution of Vocational Education to Botswana's Economy

**Samuel Oshima Mmolai**

Department of Higher Education  
Faculty of Education and Health  
Botho University

**Ushe Makambe \***

Department of Graduate Studies and  
Research, Faculty of Business and  
Accounting Botho University

**Abstract.** The aim of this study was to examine stakeholder perception of the contribution of vocational education (VE) to the economy of Botswana. A survey design was adopted. The sample included staff of the Ministry of Education, Vocational Colleges and Industry at the time of the study. A questionnaire was used to collect data from 61 respondents. The results confirmed that stakeholders believed that while VE was playing a significant role in fostering economic growth, it did not effectively translate into benefits to its recipients and it also failed to bring industrialisation to Botswana. For stakeholders to realise more benefits from VE, there is need to review the curriculum to become more relevant, ensure that unemployed graduates access finance to start businesses and for the government to attract investment in heavy industry to stimulate industrialisation.

**Keywords:** BTVET; Development; Graduate employment.

## 1 Introduction

In Botswana, VE became critical in 1966 when the country obtained its independence. This system of education became a critical instrument for the establishment of human capital that was required to serve in the new administration as well as in the private sector (Mupimpila & Narayana, 2009). Various authors view VE as a form of education that leads to the acquisition of qualifications that are related to a profession, trade, skill, art or employment. It provides the necessary training and the appropriate skills and technical knowledge enabling graduates to



East African School of Higher Education Studies &  
Development, Makerere University

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\* Corresponding author: [makambe2006@gmail.com](mailto:makambe2006@gmail.com).

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exercise a profession, an art or an activity independently of their age and level of training (Dike, 2009; Dalby & Noyes, 2015; Choi, 2016; Heitmann, 2017). Dalby (2015) further notes that, unlike university education which focuses on the acquisition of numeracy and literacy skills, VE places emphasis on the acquisition of practical skills that are based on craft and handy work in order to satisfy the continuously changing labour market needs.

In Botswana, VE has traditionally been provided at brigades and technical and other training institutions. Heitmann (2017) argues that the role of VE in Botswana is an instrumental one – that of equipping the unskilled and skilled with practical skills in craftwork to perform specialised tasks in a work environment for occupations required in industry and commerce. In addition to these generic benefits, Dalby (2015) suggests that there are additional benefits for the small, micro and medium enterprise (SMME) sector where VE graduates can be self-employed and use their skills to run their own businesses and earn a living. The idea behind the introduction of VE in Botswana was to uplift the value of human capital in the country and create employment for the youths given the high number of them who were unemployed at the time Botswana gained its independence (Dalby & Noyes, 2015; Heitmann, 2017). Its graduates have been able to gain employability skills, and some have been absorbed into the private and public sectors of the economy and hence these youths have become self-reliant and economically useful to the country although a significant number of them were still unemployed (Mupimpila & Narayana, 2009; Choi, 2016; Bob, 2018).

There has not been much research conducted on the role of VE on the economy of Botswana. This study therefore examined the stakeholder perception on the role that VE has played in the economic development of Botswana in terms of the actual and perceived contribution to the creation of employment opportunities for its graduates. An examination of the effects of VE is important as it reveals its proficiency, or otherwise, as a measure of employees' productivity.

## **2 Related Literature**

This section presents a review of related literature concerning the effects of VE on the economy by examining and analysing current and past studies. The section discusses the concept of VE and assesses its broader role in the general economy of a country and as a social inclusiveness tool.

### **2.1 Concept of Vocational Education**

There is a lack of universality about the definition of VE. In practice, the definition of VE has been found to be ambiguous and highly contextual (Stone, 2002; Goldin & Katz, 2008; Agrawal, 2013). On further investigation, it appears there is agreement on the subject matter of VE (Clarke & Winch, 2007; Dike, 2009).

Cedefop (2009) and Morris (2015) view VE as a multi-dimensional alternative pathway that develops individual and collective work knowledge, skills and occupational competence.

A further attempt to explain VE is provided by Greinert (2005) and Agrawal (2013) who note that this type of education imparts practical skills that are acquired in a shorter timeframe for specific trades as opposed to the formal standard education system which takes longer and is much more demanding. These authors further aver that VE is a non-university education, learning and training which occurs post-secondary, consisting mainly of apprenticeship and technical education and training programmes at various educational levels for a specific vocation or career or trade in an occupational area. Some of the occupational areas covered by VE include works in industry, commerce, production, information communication technology (ICT) and trades in television production, masonry, electronics, carpentry, drafting, graphic communications, automotive studies, and electricity and horticultural studies (Greinert, 2005; Goldin & Katz, 2008; Agrawal, 2013).

## **2.2 Role of Vocational Education on the General Economy**

Vocational education plays an important role in the economic growth and development of many countries, Botswana included (Choi, 2016; Bob, 2018). According to Alam (2007), the concept of VE is a human capital development strategy. The same author contends that in the 1960s, VE was viewed as a national investment into the development of human capital in order to develop capable manpower that could fill positions in government and other sectors of the economy and enable productivity increases thus fostering economic growth.

The role of VE in stimulating economic growth is further highlighted by Dike (2009) who concurs that this form of education is a formidable catalyst of economic growth. This view is reinforced by Mupimpila and Nayaran (2009) who contend that the physical and human capital variables that characterise VE have a significant impact on economic growth and development. This view is further buttressed by Bob (2018) who further postulates that economic prosperity can only be enjoyed from leveraging and harnessing human capital with infrastructure, technology and financial capital for the sourcing, manufacturing and distribution of goods and services. Investment in VE goes a long way into the development of human capital which stimulates economic growth and development.

Furtherance of the role of VE on economic growth is provided by Budría & Telhado-Pereira (2009) who argue that there are marked economic effects emanating from enhanced productivity of labour due to VE. The influence of VE on labour productivity is buttressed by Spielhofer and Sims (2004) who opine that the productivity of labour is slightly lower for employees with elementary VE qualifications than those with moderate and advanced certificates thus leading to a reduction in underemployment and unemployment rates. With reference to Europe, Dike (2009) concurs that VE meets immediate market demand and long-term

structural changes in economies which have led to a significant transformation of the European economies. Several other cases of positive effects of VE on economic transformation in other countries, regions and specific sectors of the economy were identified by other authors (Spielhofer & Sims, 2004; Budría & Telhado-Pereira 2009; Mupimpila & Narayana, 2009).

One other way VE stimulates economic growth and development in a country is through facilitation of innovation and technology. Spielhofer and Sims (2004) observe that a few developed nations generate new technology and this is due to the level of human capital available to develop new technology and diffuse it internationally. The readiness and flexibility of a workforce and human capital to embrace innovation determines the extent to which developing countries benefit from new technology and innovations that emanate from VE skills (Budría & Telhado-Pereira, 2009; Cho & Honorati, 2013).

In Botswana, VE has been on the rise and an assessment of individuals who qualified through this form of education has revealed that their contribution to the general economy by way of enhanced productivity, innovation and competence has been significant. Mupimpila and Narayana (2009) state that the Botswana government has prioritised skills development as evidenced by the rise in enrolments for VE programmes and courses than in formal ones. Since gaining independence, Botswana has been one of the world's fastest growing economies, averaging about 5% economic growth per annum over the past decade, while growth in private sector employment averaged about 10% per annum during the first 30 years of the country's independence (Choi, 2016). As VE typically increases productivity at the company level, it seems plausible that it should be possible to observe a similar effect in macroeconomic growth as well.

The effect of VE on the economy is reinforced by Bob (2018) who posits that the purpose of vocational education and training (VET) is to provide individuals with skills that are directly applicable in the workplace. Other authors concur that these skills that enhance technological development, innovation and diffusion of that innovation are likely to have direct and immediate effects on productivity and consequently economic growth (Rommès, Faulkner, & Van Slooten, 2005; Tikkanen, 2009; Gvaramadze, 2010). This view is confirmed by Comyn and Barnaart (2010) who postulate that the assumptions that VET is beneficial to economic growth and to social inclusion are fundamental and classical and even aid agencies such as the World Bank and the United Nations Educational, Scientific and Cultural Organization (UNESCO) highly recommend VE as the panacea to economic development in developing countries.

Emphasising further on the role VE plays in stimulating economic growth and development, especially in Botswana, Choi (2016) and Bob (2018) observe that VE has several economic benefits that include raising regional and sectoral development, increasing exports, attracting foreign investment, and increasing wages. This view concurs with the position taken by international institutions such as UNESCO which recognise and prioritise VE as critical for educational

development of mostly developing countries, enhancing labour market inclusion as well as addressing the challenges of income disparities in those countries (Choi, 2016).

### **2.3 Vocational education as a social inclusiveness tool**

Besides equipping graduates with employability skills, VE also serves a social purpose. According to Wollschläger and Guggenheim (2004), VE can be employed as a tool for the promotion of social inclusion by eliminating all the barriers to education and training. It has positive social externalities and is a means for structural change especially where the youth are concerned. It works as a crime reduction tool enabling the youth to focus on skills development rather than on sex, drugs, crime and other social vices (Kingombe, 2011). Vocational education promotes social inclusion, cohesion, mobility, adaptability, employability and competitiveness in the labour market and the economy (Wollschläger & Guggenheim, 2004). Vocational education is superior to general education from a socialisation point of view and promotes access to the labour market (Stevenson, 2005).

The role of VE as a social inclusiveness tool is reinforced by Raymond (2007) who concurs that one of the goals of this form of education is to provide training to school leavers and impart in them the necessary skills to enable them to become self-reliant individuals who are useful to the society. When this goal is adequately achieved, it would lead to the development of a graduate who easily and quickly fits into his/her society thus becoming an active and effective participant in societal activities and programmes.

Vocational education facilitates social inclusion by ensuring that the graduate immediately fits into the society through self-reliance and discouraging the unemployment syndrome (Raymond, 2007; Igweh, 2008). This view is further reinforced by Igweh (2008) who postulates that when one acquires skills in any occupation, that person can set up a business and can even employ others. That is a way of making one part of a community and will participate in its activities with confidence and a sense of belonging.

Vocational education and social inclusion are closely inter-linked in that self-reliance that may emanate from this type of education facilitates the attainment of autonomy without unnecessarily resorting to begging or browning (Raymond, 2007). The author further posits that a self-reliant individual is one who achieves a steady supply of his needs and can diversify his/her resources in order to reduce dependency on other stakeholders such as government, donors, community leaders and other members of the society. These are the people who later develop into influential individuals in their society and would later want to exert their influence in the community by seeking leadership positions as councillors, members of parliament and so on. Such people will have been fully integrated into the communities they leave, a fit made possible through the acquisition of VE. This

form of education will be responsible for their personal growth and development as citizens politically, socially and economically.

The social importance of VE is further highlighted by Nwogu (2009) who argues that its role embraces utilitarianism, that is, its graduates make a substantial contribution to the overall good of the nation and its inhabitants. As a result, VE has been adopted as an integral part of national development strategy in various countries and societies due to its impact on human capital development, productivity and economic growth thus making many citizens useful to their communities and countries (Igweh, 2008; Dike, 2009; Efajemue & Otuaga, 2010). In this way, VE becomes a critical tool in facilitating social inclusiveness as it produces young artisans, craftsmen, technicians and the necessary technologies that enable the youth to fit well in small scale enterprises, industries, colleges and universities thus preparing them for effective economic and social participation in a nation. Vocational education thus becomes an aspect of long-term learning and preparation for responsible citizenship (Igweh, 2008).

### **3 Methodology**

A survey research design was adopted for this study. The justification for this choice of design was that it enabled the coverage of a large sample within a short space of time at a reasonable cost. A quantitative research methodology was adopted whereby a questionnaire was used to collect data to examine stakeholder perception on the effects of VE on the economy of Botswana.

The population of the study included all staff who were working in the Ministry of Education, vocational colleges and industry (employers of manufacturing concerns) at the time the study was conducted. Only managers were targeted because they were better placed to understand the formulation and implementation of VE policy and whether it was successful or not. As complete coverage of the whole population was not possible due to cost and time constraints, a subset of the population (sample) was studied. A sample of 61 was selected for the study using the convenience sampling technique. This sampling technique was adopted because it is easy to use and also allows the selection of information-rich respondents.

In order to ensure the reliability of the questionnaire, a pilot study was conducted before the questionnaire was distributed to the actual respondents. The questionnaire was also pre-tested before final use. Voluntary and informed consent were sought from the respondents and they were informed that they could withdraw their participation at any time during the study.

## **4 Findings and Discussion**

This section presents the findings on the stakeholder perception on whether VE contributed to the growth of Botswana's economy. A total of 61 respondents participated in this study and all the questionnaires were returned ensuring a 100% response rate. The constructs used in this section were nine statements that required the respondents to indicate the extent to which they agreed or disagreed with each statement. These statements were constructs that measured the perception of stakeholders on the role of VE on the general economy of Botswana through employment creation for the youths. The findings are indicated in Table 1 below.

**Table 1: Role of Vocational Education on the General Economy of Botswana**

Code	Role of VE on the economy	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree	X	SD
IJJP	Vocational education improves individual job performance and productivity of firms	16.4%	62.3%	6.6%	13.1%	1.6%	3.8	0.9
ECFC	Vocational education is an excellent catalyst for creating employment opportunities	18.0%	60.7%	14.8%	4.9%	1.6%	3.9	0.8
RIPR	Vocational education results in poverty reduction, food security and social cohesion in youths	13.1%	44.3%	14.8%	21.3%	6.6%	3.4	1.2
PEYB	Vocational education has positive effects on the youths in Botswana	21.3%	57.4%	8.2%	13.1%	0%	3.9	0.9
WTPR	Vocational education is a waste of taxpayers' resources	6.6%	16.4%	26.2%	29.5%	21.3%	2.6	1.2
ILFU	Vocational education increases labour force up skilling and productivity	16.4%	52.5%	11.5%	18.0%	1.6%	3.6	1.0
PWES	Vocational education results in positive wage effects to skilled workers and negative long run wage increases	16.4%	23.0%	31.1%	24.6%	4.9%	3.2	1.1
GIDG	Unemployed VE graduates increase dependence on government social programs	26.2%	39.3%	13.1%	18.0%	3.3%	3.7	1.2
PEGI	Vocational education promotes economic growth through industrialization/production	4.9%	4.9%	9.8%	57.4%	23%	3.9	0.9

Key: IJJP= VE improves individual job performance and productivity of firms; ECFC= VE is an excellent catalyst for creating employment opportunities; RIPR= VE results in poverty reduction, food security and social cohesion in youths; PEYB= VE has positive effects on the youths in Botswana; WTPR= VE is a waste of taxpayers' resources; ILFU= VE increases labour force up skilling and productivity; PWES= VE results in positive wage effects to skilled workers and negative long run wage increases; GIDG= Unemployed VE graduates increase dependence on government social programs; PEGI= VE promotes economic growth through industrialization/production



Table 1 above shows the results of the respondents concerning stakeholder perception on the role of VE on the general economy of Botswana as measured by the nine constructs, that is: IJJP, ECFC, RIPR, PEYB, WTPR, ILFU; PWES, GIDG, and PEGI.

According to Table 1, 78.7% of the respondents agreed that VE improved individual job performance and the productivity of firms, while 21.3% disagreed. This demonstrates that most of the respondents believed that VE improved job efficiency and firm output which directly contributes towards economic growth. These results confirm the literature findings that VE is a catalyst for creating employment opportunities for the youth thus enabling them to pay tax and increase consumption expenditure hence economic development (Alam, 2007; Dike, 2009; Budría & Telhado-Pereira, 2009). Taxes paid by employed youth are used by the government for infrastructure development thus further fuelling economic growth and development.

The results in Table 1 reveal that 57.4% of the respondents agreed that VE resulted in poverty reduction, food security and social cohesion in youths while 42.6% disagreed. The fact that just over half of the respondents concurred suggests that the number of people who were effectively improving their lives through VE may not have been very significant. The effect of VE on poverty reduction, food security and social cohesion was therefore of an average standard. What the findings mean was that close to half the sample surveyed believed that VE was not effectively playing a role in reducing poverty in the communities and in assisting societies to increase food production. Failure to do so meant that the willingness of members of the societies in Botswana to cooperate with each other in an attempt to enhance their survival and prosperity was negatively affected.

Table 1 also shows that 78.7% of the respondents agreed that VE had positive effects on the youth in Botswana, while 21.3% disagreed. Vocational education, according to the respondents, had marked positive effects on most of the youth in Botswana. This emanated from the positive effects VE had on the general economy resulting in benefits to young Botswana. In most developing countries today, the youth constitute the largest segment of the consumer population with a higher marginal propensity to consume than the adult population hence creating a higher demand for goods and services. This may motivate manufacturers to produce more goods and services that satisfy the specific needs and wants of the young people which may stimulate new technological innovations thus resulting in the expansion of the manufacturing industry and contributing to further economic growth.

Table 1 shows that 77% of the respondents disagreed with the statement that VE was a waste of taxpayers' resources while only 23% agreed. These findings demonstrate that most of the respondents acknowledged the vital role played by VE on the economy of Botswana and how it benefited the citizens. All things being equal, the 49.2% of the respondents (23%+ 26.2% uncertain) who did not clearly indicate that VE was not a waste of the taxpayer's resources was too high given its unquestionable role in the economic growth of especially developing countries. This

view is supported by a number of studies that concur that VE is a national investment into the development of human capital (Alam, 2007), a formidable catalyst of economic growth (Dike, 2009), an enhancer of labour productivity (Spielhofer & Sims, 2004; Budría & Telhado-Pereira, 2009), stimulator of new technology and innovations (Budría & Telhado-Pereira, 2009; Cho & Honorati, 2013) and a promoter of social inclusion, cohesion, mobility and adaptability of graduates as members of a society (Wollschläger & Guggenheim, 2004; Kingombe, 2011). All these aspects play a critical role in stimulating economic diversification and growth of a country through galvanising domestic and foreign direct investment (FDI).

Table 1 shows that about 70% of the respondents agreed that VE increased labour force up-skilling and productivity, while about 30% disagreed. The results epitomised the prevailing state of VE in Botswana that it increased labour force up-skilling and productivity which may have, in turn, contributed towards positive productive output which directly affects economic growth. This meant that graduates of VE were positively contributing to human capital growth in the country. Given that critical role, it is not pleasing to note that about 30% of the respondents did not believe that VE increased labour force up-skilling and productivity.

Close to a third of the respondents were of the view that VE did not increase labour force up-skilling and productivity. This may mean that this type of education was not effectively producing graduates with boosted morale and productivity, which could imply that the investment in people was not solid enough. If VE graduates were not happy employees, then they were not likely to enhance customer satisfaction hence would not be a wise investment to the organisation and not promote the corporate brand within the organisation, the customers, the community and elsewhere.

Table 1 further reveals that about 39% of the respondents agreed that VE resulted in positive effects on the wages of skilled workers, while about 61% disagreed or were unsure as to whether such positive wage effects really arose. This finding is evidence that indeed there was a problem with VE's efficacy in translating positive net benefits to its recipients whether in getting jobs or in becoming economically empowered as a result of the jobs obtained. Based on this finding, it can be realised that intended benefits from VE that take various forms after training were not effectively available such as improved earnings, enhanced employment opportunities, increased labour force mobility, enhanced capacity for lifelong learning and improved general working conditions and job satisfaction. These are the obvious benefits expected by any employed VE graduate which were surprisingly not prevalent to the Botswana VE graduates based on the findings of the study.

Table 1 reveals insightful results as about 80% of the respondents did not agree that VE promoted economic growth through industrialisation/production while only about 20% agreed. While the results of the study revealed that most of the

respondents appeared to acknowledge the link between VE and economic growth, most of them did not believe that the same economic growth stimulated industrialisation. This may mean that VE in Botswana may not have been effective in preparing graduates for the world of work through the acquisition of scientific and practical knowledge and skills to match the structural changes in Botswana's economy. Skills imparted by VE institutions may not have been adequate to encourage foreign investors to establish production, assembly and packaging plants in the country in order to supply the market with finished products previously imported mostly from South Africa.

Table 1 also shows the deviation for the role of VE on the general economy constructs that is: IJJP, ECFC, PEYB and PEGI which reveals a small standard deviation (SD range=0.8 to 0.9) which means that the values in the statistical data set are close to the mean ( $\bar{x}$ =3.8 to 3.9) of the data set on average. This contrasts with the role of VE on the general economy sub-constructs that is RIPR, WTPR, ILFU, PWES and GIDG which have greater variability (SD range = 1.0 -1.2) around a lower mean range of between 2.6 and 3.7. It appears that there is an inverted relationship between the mean and the standard deviation in which a lower mean is associated with a higher standard deviation and the converse is also true.

The findings of the study reveal that the effect of VE on the general economy, based on the perception of the stakeholders, was an important one, playing a vital role in the supply of labour as a critical input into the generation of economic growth through individual performance, firm productivity, technological diffusion, and skills usage.

## **5 Conclusion and Recommendations**

This study has demonstrated stakeholder perception on the fundamental roles and effects of VE on the economy of Botswana. The study demonstrated that stakeholders perceived that VE played a significant role in the general economy by facilitating the acquisition of scientific, practical and applied skills for employment and self-employment. It is evident from the findings of the study that the model for VE that existed at the time of the study was no longer effective and was out of touch with the demands of the youth, global consumers and industrial organisations.

The findings have established that generally, stakeholders were of the view that the role of VE on the economy of Botswana was positive in some variables identified in the study. The role of VE in Botswana was constantly shaped by the nature of VE, the policy actions and convictions of the government, the demands of employers and the global influences of international VE. Although VE had a positive impact on the economy in general through creation of employment for the youth, it was not effective in providing significant benefits to the employed graduates through improved remuneration and working conditions as expected.

Whereas in other countries where VE was effective, such as in Malaysia, the full cycle of the implementation of this form of education resulted in industrialisation though the establishment of manufacturing plants by foreign investors, stakeholders felt that the same has not happened in Botswana. At the time of the study, there was no significant manufacturing in Botswana and the economy remained predominantly retail and relying on imports from South Africa for most of its requirements. In order to realise the full benefits of VE, the following recommendations were suggested:

- There was need for the government of Botswana to review the VE curriculum and pedagogical strategies to ensure that the skills imparted into the learners were relevant to the needs of society and industry. This would enable VE graduates to contribute more effectively to economic development through increasing industrial production and revenue generation hence stimulating food supplies and poverty reduction.
- The role of VE in the economic development of Botswana needs to be more clearly articulated and publicised so that awareness of its importance among the citizenry is enhanced in order to justify continued government expenditure in VE. This would reduce the perception among some citizens that financing VE was a waste of the taxpayer's money.
- Activities of VE graduates also need to be documented and publicised through alumni association and state media so that Batswana are conscious of the importance of VE skills through their contribution to economic development. This would enable the citizens to appreciate that VE increased labour force up-skilling and productivity.
- The government should embark on a programme, through state entities such as the Local Enterprise Authority (Lea), the Botswana Development Corporation and the Citizenship Enterprise Development Authority (CEDA), that ensures easy access to cheap finance by VE graduates to enable those who are not employed to start their own businesses. In addition, the government should ensure that the minimum wage for VE graduates is high in order to boost their income hence their social status. This would make the people appreciate the benefits of VE to the recipients.
- The government of Botswana is urged to put in place measures to attract FDI into the country from heavy industry investors such as iron and steel, mining, car assembly and so on who would set up production plants utilising the scientific and practical skills of VE graduates. Such a move would stimulate industrialisation in Botswana using the technical skills of VE graduates.

## References

- Alam, G.M. (2007). Private higher education in Bangladesh: The impact on higher education governance and legislation. Unpublished PhD thesis, University of Nottingham, United Kingdom.
- Agrawal, T. (2013). Vocational education and training programmes: An Asian perspective. *Asia-Pacific Journal of Cooperation Education*. 14 (1). 16-17.
- Bob, N.N. (2018). Perspectives and strategies of contemporary vocational education. Gaborone: Magnet Publishing.
- Budría, S., & Telhado-Pereira, P. (2009). The contribution of vocational training to employment, job-related skills and productivity: evidence from Madeira. *International Journal of Training and Development*. 13 (1). 53-72.
- Cedefop (2009). Continuity, consolidation and change: Towards a European era of vocational education and Training, Cedefop, Thessaloniki.
- Cho, Y. & Honorati, M. (2013). Entrepreneurship programmes in developing countries: A meta regression analysis, IZA Discussion Paper no. 7333, April, accessed 12 November 2013.
- Choi, S. (2016). Effects of vocational education on wages: Case of the Philippines. *Journal of Economics and Sustainable Development*. 7(10). 112-129.
- Clarke, L. & Winch, C. (eds.) (2007). Vocational education: International approaches, developments and systems. London & New York: Routledge.
- Comyn, P. & Barnaart, A. (2010). TVET reform in Chongqing: Big steps on a long march. *Research in Post-compulsory Education*. 15. 49-65. 10.1080/13596740903565335.
- Dalby, D. & Noyes, A. (2015). Connecting Mathematics teaching with vocational learning. *Adult Learning Mathematics: An International Journal*. 10(1). 40-49.
- Dike, V.E. (2009). Vocational education: Missing link in Nigeria's development policy. Retrieved on June 12<sup>th</sup> 2012 from: <http://www.countrysides.us/Nigeria/56.htm>.
- Efajemue, O.O. & Otuaga, O.U. (2010). The need to equip youths with vocational skills for sustainable development in Nigeria: A paper presented at the third international conference on research and development at Miklim Hotels, East Legon, Accra, Ghana. Nov. 23rd – 26th, 2010.
- Gvaramadze, I. (2010). Low-skilled workers and adult vocational skills-upgrading strategies in Denmark and South Korea. *Journal of Vocational Education and Training*. 62. 51-61. 10.1080/13636821003605395.
- Goldin, C. and Katz, L.F. (2008). *The Race between Education and Technology*. Cambridge: Harvard University Press.
- Greinert, W.D. (2005). Mass vocational education and Training in Europe. *CEDEFOP Panorama Series*. 118.
- Heitmann, W. (2017). Vocational education and training for inclusive growth in development cooperation. European Commission Tools and Methods Series,

- Reference Document No 24. DEVCO Migration, Employment, Inequalities Unit.
- Igweh, A.U. (2008). Vocational technical training: A strategy for self-reliance and national development. *Ebonyi Technology and Vocational Education Journal*, 2(1). 112-117.
- Kingombe, C. (2011). Lessons for developing countries from experience with technical and vocational education and training. London: International Growth Centre.
- Morris, P. (2015). Review of the Pacific Framework for Technical and vocational education and Training [TVET]. Pacific Community (SPC) and UNESCO.
- Mupimpila, C. & Narayana, N. (2009). The role of vocational education and technical training in economic growth: A case of Botswana. *Int. J. Education Economics and Development*. 1(1). 3-13.
- Nwogu, P.O. (2009). The global economic crisis: A challenge to entrepreneurship development in technical and vocational education and training (TVET). A paper presented at NATT 22nd Annual National Conference Bauchi, Oct. 17-21.
- Raymond, E. (2007). Constraints affecting electronics of roadside technicians in Minna Metropolis. *JONATT*. 6(2). 8-14.
- Rommes, E., Faulkner, W. & van Slooten, I. (2005). Changing lives: The case for women-only vocational technology training revisited. *Journal of vocational education and Training*. 57(3). 293-317.
- Spielhofer, T. & Sims, D. (2004). Modern apprenticeships in the retail sector: Stresses, strains and support. *Journal of Vocational Education and Training*. 56(4). 181-198.
- Stevenson, J. (2005). The centrality of vocational education and Training. *Journal of vocational education and training*. 57(3). 335-354.
- Stone, D. (2002). Policy paradox: The art of political decision making. New York: Norton & Company, Inc.
- Tikkanen, T. (2009). The learning society as a greying society: Perspectives of older workers and lifelong learning. Modernising vocational education and training. Fourth report on vocational training research in Europe. Background report, Vol. 2, Cedefop Reference Series 70 (Luxembourg: Office for Official Publications of the European Communities).
- Wollschläger, N. & Guggenheim, É. (2004). A History of vocational education and Training in Europe: From divergence to convergence. *European Journal: Vocational Training*.